

Work Order ID 139393

November 26, 2015 1:21:47 PM

139393

Page 1

Item ID: D212-725-1-931

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Manifold Tube Ass'Y

Start Date: 11/26/2015 Start Qty: 1.00

Required Date: 1/11/2016 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

20151126

Approvals: Process Plan: *SM*

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4236	<i>REV. B</i>

DEC 15 2015

110 0.00

110

Purchasing

Memo

0.00

Purchasing

Issue P/O: *30738*

E-mail or Ship electronic file and or dwg to vendor

Manufacture as per Dwg and supplied files

Possible supplier: ~~CINTUBE~~

Material release note is required.

DEC 15 2015

120

Receive & Inspect for Damage & Mat'l Certs

0.00

120

Packaging

Memo

0.00

Packaging

21 SP 16-01-12

121

Mill conc

drill Holes as per dwg

J.C.L. 16-01-15

122

QC 5

J.C.L. 16-01-15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : ☐			

Work Order ID 139393

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Page 2

Item ID: D212-725-1-931

Accept

N900040100Setup Start ***NS1***

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Item Name: Manifold Tube Ass'Y

Start Date: 11/26/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 1/11/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC6- Inspect dimensions to drawing 0.00

130QC
Quality Control

Memo

0.00

①

②

16-01-15

DAS
9
9-89150 Weld per dwg A/R S.S. rod Batch: M123873 0.00***150***

Large Fab

Large Fab

Memo

0.00

Large Fab

Weld flatten end and -141 brackets per dwg and template DT8914

1

16-01-15

160 QC9- Inspect visual per QSI004- Fusion Welds 0.00

160

QC

Memo

0.00

Quality Control

③

16-01-15

DAS
9
9-89

DQA:

Date:

16/02/09



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

16/02/05

Work Order update only

Work Order: <u>137393</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No. <u>D212-725-1-931</u>		Rework ☐		Skid-tube ☐		Cross tube ☐		Water Jet ☐		Engineering ☐	
NCR No. <u>16-5588</u>		Scrap ☒		Machining ☐		Small Fab ☒		Prod. Eng. Coord. ☐		Quality ☐	
		Use-as-is ☐		Thermoforming ☐		Finishing ☐		Rec/Store/Packaging ☐		Other ☐	
		Suspected Unapproved ☐		Large Fab ☐		Composite ☐		Supplier ☐			
Date: <u>16-01-16</u>		Step #: <u>130</u>		QTY Effective: <u>(2)</u>				MRB (QSI042) Approval DAS 9 9-89 <u>16-01-15</u>			
Description Work Order Deviation				Disposition				Lead hand / Supervisor Approval Verification DAS 30 9-89 <u>JAN 31 2016</u>			
1 part scrap good angle measure but not good R.C. no proper tooling				Scrap & destroy none replace create tooling				QC / QA Coordinator Approval DAS 9 9-89 <u>16-01-15</u>			
1 part scrap bad flat the end on the wrong side R.C. operation didn't place part correctly on sfg.				Scrap & replace B: 125250							
Root Cause				FAULT CATEGORY							
Environment ☐ No Re-verification ☐ Design ☒ Operator ☒ Doc/Data ☐ Offset/Setup ☒ Equip/Tooling ☒ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐				Pressure/Forced ☐ Temperature/Cure ☐ Bending ☐ Set-up ☒ Centre Not Concentric ☐ BOM/Route ☐ Cracks ☐ Broken/Damage/Defect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Cuffs ☐ Contamination ☐ Crushing ☐ Countersink ☐ Heat Treat ☐ Cut Too Short ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Marks/Chatter ☐ Drill Holes ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Folio/Program ☐ Outside Dimensions ☒ Grain ☐ Over/Under tolerance ☒ Weld ☐ Part Incorrect ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Out of Sequence ☐ Part Moved ☐ Off-set ☐ Drawing ☐ Mis-labeled ☐ Finish ☐ Fit/Function ☐ Misread ☐ Misaligned/off center ☐ Turning Sequence ☐							
OTHER :											

Work Order ID 139393

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Page 3

Item ID: D212-725-1-931

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Manifold Tube Ass'Y

Start Date: 11/26/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 1/11/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC5- Inspect part completeness to step on W/O	0.00							
170									DAS
QC	Memo	0.00							9
Quality Control									9-89
180	Identify as per dwg & Stock Location:	0.00							
180									
Packaging	Memo	0.00							DAS
Packaging									28
									9-89
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

① 16-01-15

IX DAS 28 9-89 JAN 15 2016

MLJ JAN 15 2016

MF
16-1-15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER :							

Picklist Print

November 26, 2015 1:21:52 PM

Page 1

Work Order ID: 139393

139393

Parent Item: D212-725-1-931

D212-725-1-931

Parent Item Name: Manifold Tube Ass'y

Start Date: 11/26/2015

Required Date: 1/11/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.06.25 PER REV.A DWG DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN818-16J *AN818-16.J* Nut		Purchased	No			110	Each	8.0000	1	1	DAS 30 9-89		JAN 3 1 2016
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST324		8							
				122807		8							
M304TR1.000W.049 *M304TR1.000W.049* 304 RD Tube 1.00 x .049W		Purchased	No			110	f	93.2442	4	4.210526			JAN 1 4 2016
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				GA002		93.244247							
				125250		53.244247							
				m130551		40							
MS20819-16J *MS20819-16.J* Sleeve		Purchased	No			110	Each	6.0000	1	1	DAS 30 9-89		JAN 3 1 2016
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST305		6							
				122807		6							
D212-725-1-141 *D212-725-1-141* Bracket		Manufactured	No			150	Each	0.0000	2	2			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					

D212-725-1-~~931~~ CL15/12/15 X 2
189

DQA: _____ Date: _____



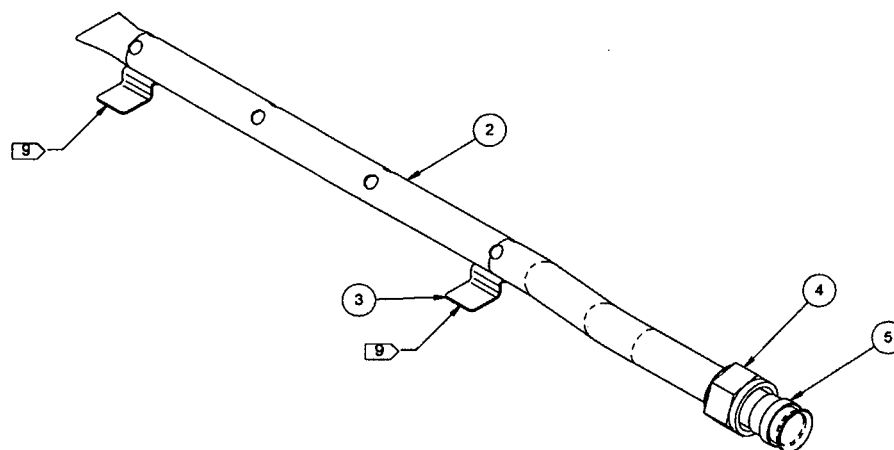
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

ITEM	QTY -931	PART NUMBER	DESCRIPTION
1	X	D212-725-1-931	MANIFOLD TUBE ASSEMBLY
2	1	D212-725-1-139	MANIFOLD TUBING
3	2	D212-725-1-141	BRACKET
4	1	AN818-16J	NUT
5	1	MS20819-16J	SLEEVE



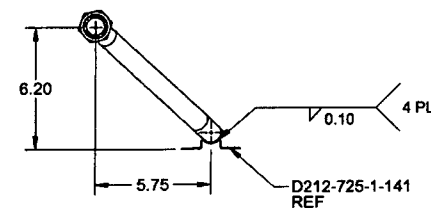
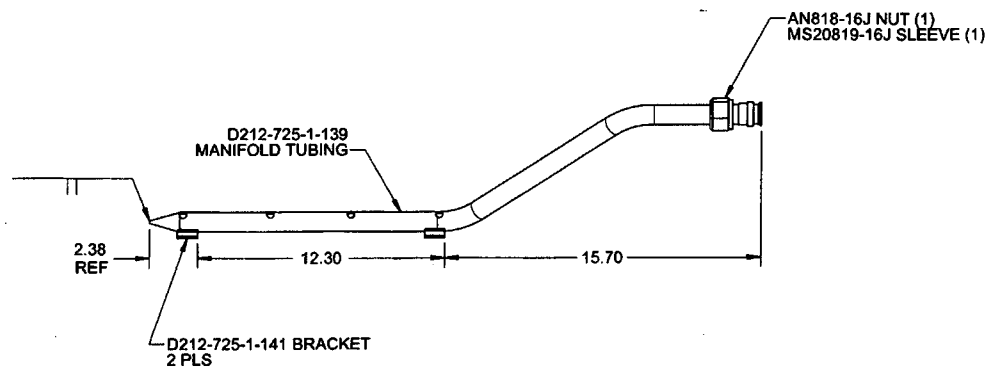
CL DEC 15 2015
W/O. 139393

D212-725-1-931 MANIFOLD TUBE ASS'Y

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.79 lbs
- 8) WELD PER DART QSI 004
- 9) TRIM AS REQUIRED TO SUIT AIRCRAFT MOUNTING HOLE, MAINTAIN MINIMUM EDGE DISTANCE

B	REVISE DIMENSIONS TO D212-725-1-139 (ZN A4-2) & D212-725-1-931 (ZN A4-3), REVISE D212-725-1-141/-141F (ZN B4-4, B4-5)	RF	12.11.15
A	NEW ISSUE	RF	11.02.24
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D4236	SHEET 1 OF 6
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	TUBE ASSEMBLY	NTS
DATE	12.11.15	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

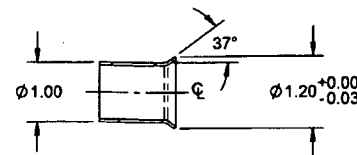
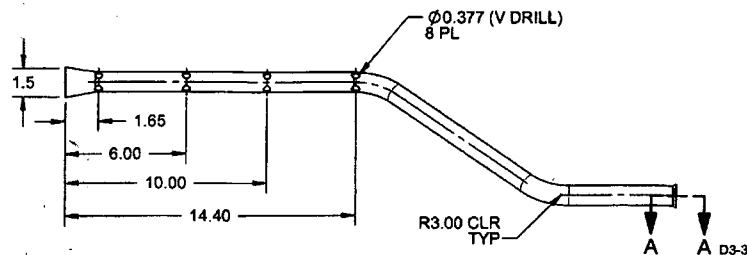


D212-725-1-931 MANIFOLD TUBE ASS'Y

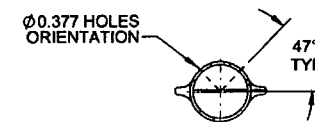


RELEASED
2013-03-21
MP

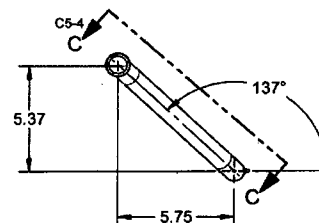
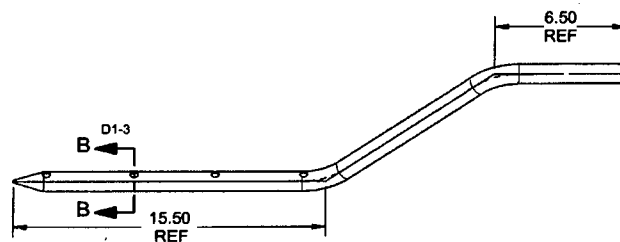
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO. D4236	REV. B
MFG. APPR.	RF	SHEET 2 OF 6	
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	TUBE ASSEMBLY	NTS
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SECTION A-A C5-3
(SCALE 3X)
(FLARE AFTER ASSEMBLY
OF SLEEVE & NUT)



SECTION B-B C7-3
(SCALE 3X)



D212-725-1-139 MANIFOLD TUBING
(MANUFACTURE PER TEMPLATE DT8914)



NOTES:

- 1) MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL, 1.00 O.D. x 0.049 WALL
PER ASTM A213 OR ASME SA213 OR ASTM A269
REF DART SPEC. M304TR1.000W.049
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.39 lbs

DESIGN
DRAWN
CHECKED
MFG. APPR.
APPROVED
DE APPR.
DATE 12.11.15

RF
RF
RF
RF
RF
RF
RF

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO. **D4236**
TITLE **TUBE ASSEMBLY**
REV. B
SHEET 3 OF 6
SCALE
NTS
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RELEASE
2013-03-21
MD

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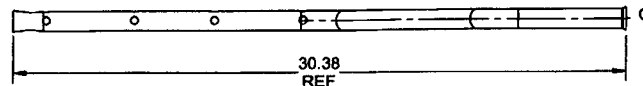
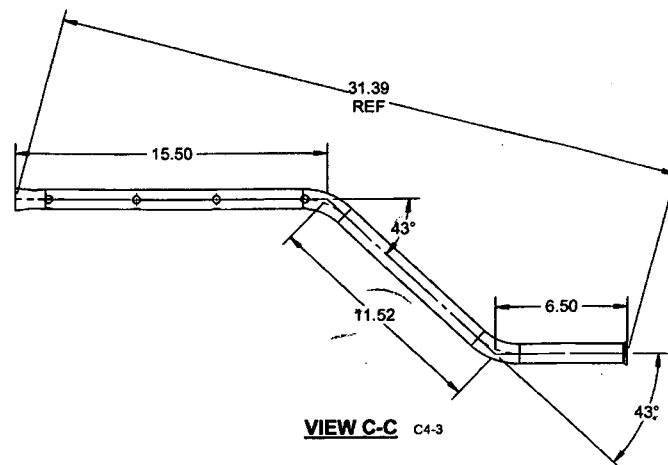
1

D

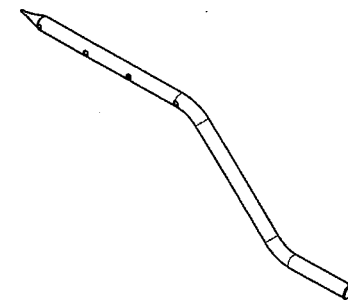
C

B

A



D212-725-1-139 MANIFOLD TUBING
AUXILIARY VIEW



D

C

B

A

RELEASED
2013-03-21
MP

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D4236	SHEET 4 OF 6
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	TUBE ASSEMBLY	NTS
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1



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO30738

Purchase Order Date 12/15/2015

PO Print Date 12/15/2015

Page Number 1 of 2

Order From :

VC-ATB001

AGGRESSIVE TUBE BENDING
9750 - 188TH STREET
SURREY, B.C. V4N 3M2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED

Contact Name

Vendor Phone 604-882-4872

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

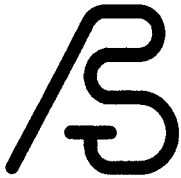
Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D212-725-1-139	Manifold Tubing	1/6/2016 Yes 1/6/2016		2.00 Each	\$185.00	\$370.00
MANUFACTURE AS PER DWG D212-725-1-139 REV. B B139393							
Line Total:							\$370.00
2	71401-45	PROCUREMENT QUALITY CLAUSES	1/6/2016 No 1/6/2016		1.00	\$0.00	\$0.00
Procurement Quality Clauses A004 faa-pma/tso A005 right of entry A016 personnel qualification A026 certification of conformance A040 notification of quality escape A041 quality management A042 dart noyification by supplier A043 retention of quality documents							

SP16-01-12

Note:

12/15/2015

**AGGRESSIVE TUBE BENDING INC.**

9750 188th Street
Surrey, BC V4N 3M2
Phone: 1-604-882-4872
Fax: 1-604-882-4873

PACKLIST

Packlist ID: 27658
Date: 1/8/2016
Page: 1 of 1

Shipped By: TERRY

Sold To Address	Ship To Address
DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA	DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA

CUSTOMER ID		CUSTOMER PO		PAYMENT TERMS		F.O.B.	
2883		PO30738		Net 30			
SALES REP ID		SHIPPING METHOD			SHIP DATE	OUR ORDER NUMBE	
YT		FEDEX 1-800-463-3339			JAN 11/16	15-1525	
QUANTITY		CUSTOMER					
ORD	SHF	BCK	PART ID	DESCRIPTION		PART NO.	DRAWING #

2 2 0

SUP/BEND 1 X .049 316 SS

D212-725-1-13
9

Rev: B

ORDER SPECIFICATIONS

FEDEX # 151793240

SP16-0112

RECEIVED BY: _____

検査成績表 (MILL CERTIFICATE)

需要家:

(CUSTOMER) UNIFIED ALLOYS

注文者: 三京物産株式会社

(SUPPLIER) (SANKYO&CO., LTD.)

品名:

(COMMODITY) SEAMLESS STAINLESS STEEL

COLD DRAWN TUBE ASTM A269/A213 ASME/SA213 (A.W.) TP316/316L

契約番号: T55CA10C

(CONTRACT NO.)

三京不銹鋼管(沈陽)有限公司

SANKYO STAINLESS TUBE(SHEN YANG) CO., LTD.

中国・瀋陽市蘇家屯区玫瑰街115号

(NO.115 MEIGUI STREET, SUJIATUN DISTRICT, SHENYANG, P.R. CHINA)

寸法: 1" OD × 0.049" WT × 20' LG

(SIZE)

発行日: 2015.07.12

(DATE OF ISSUE)

証明番号: 15-0544

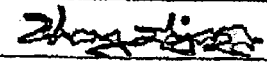
(CERTIFICATE NO.)

需要家管理番号: P.O.VP-117582

(CUSTOMER ORDER NO.)

製作番号 (Mfg. No.) (三京)		ロット番号 (Lot No.)	製造番号 (Mfg. No.)	製鋼番号 (Heat No.)	数 量(Quantity)			引 張 試 験(Tension Test)			硬さ試験 (Hardness Test) HRB	結晶粒度 (Grain Size)	へん平試験 (Flattening)	GOOD							
					本数 (No. of Pcs.)	重 量 (Mass) kg	延 長 (Total Length) m	0.2%耐力 (0.2% Y. S.) MPa	引張り強さ (T. S.) MPa	伸び (E.) (%)											
(SANKYO)		指定単位(Unit Designated)			本(Pcs.)	kg	m	MPa	MPa	(%)			押し広げ試験 (Flaring)	GOOD							
		規 格 (Specification)		最小(Min)				170	485	35											
				最大(Max)																	
15-06-064		01		11E645	27	124	1	280	590	63.0	75.0		外径寸法試験 (Measurement of surface)	GOOD							
													渦流探傷試験 (Eddy Current)	GOOD							
													顕鏡試験 (Microscopic)	—							
													粒間腐蝕試験 (Intergranular Corrosion Test) ASTM A262 PRACTICE E	GOOD							
TOTAL														27	124						
化学成分表 (Chemical Composition) %																					
製鋼番号 (Heat No.)		C × 100	Si × 100	Mn × 100	P × 1000	S × 1000	Ni × 100	Cr × 100	Mo × 100	備考(Remarks) SOLUTION HEAT TREATMENT: 1100°C × 2.55Min/W.Q EN-10204-3.1 NACE MR-0175 ASTM A269-10/ASTM A213-11w/ ASME SA213-08 (A.W.)											
最小(Min)							1000	1600	200												
最大(Max)		3.5	100	200	45	30	1400	1800	300												
11E645		2.1	26	118	32	2	1016	1614	210												

上記注文品は、御指定の規格又は仕様に従って製造されその要求事項を満足していることを証明します。
(IT IS HEREWITH CERTIFIED THAT THE ABOVE MATERIALS ARE SATISFACTORY IN COMPLIANCE WITH THE REQUIREMENTS SPECIFIED IN THE CONTRACT.)

総工場長 
(MANAGER OF QUALITY SYSTEM SECTION)